



How the National Center for the Clean Energy Workforce can meet Industry and Organization Needs in California

CALIFORNIA DEPARTMENT OF EDUCATION
Tom Torlakson, State Superintendent of Public Instruction



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State Superintendent
of Public Instruction

Could the center play a significant
role in curriculum development
of Career Technical Education
programs in K-12
and post-secondary?



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YES –

- Curriculum
- Teachers
- Training
- Information
- Advocacy



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Career Technical Education Sequence of Courses

Sequence of Courses	Grade 10	Grade 11	Work Experience	Grade 12
Career Technical Education	Foundation -Career options & basic skills	Concentrator -Focused Skills & knowledge		Capstone: Experience, choose, & prepare

Preparation for:
The Workforce
Post-secondary education



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Green Careers Academies

- AB 519 (2007– 2012) Appropriated \$12,000,000 from the Public Interest Research, Development, and Demonstration Fund to create California Partnership Academies to
- focus on *clean technology and energy businesses*
- and provide *skilled workforces* for the products and services for
 - Energy or water conservation or both
 - Renewable energy
 - Pollution reduction
 - Or other technologies that improve the environment in furtherance of state environmental laws.

FourEnergy

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Green Academy Curriculum

High School: Green Academy Curriculum

Curriculum Module Training Videos

Green Curriculum Modules

- [Introduction to Energy](#)
- [Energy Auditing](#)
- [Green Construction](#)
- [Introduction to Alternative Fuels](#)
- [Green Jobs Internship Manual](#)

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To share High School/College energy curriculum please download and complete the form below. When completed email the form to ntransue@attei.com.

- [High Energy Academy: Curriculum Form](#)



*Produced by the Advanced
Transportation Technology
and Energy Initiative*

www.attecolleges.org

<http://www.fourenergy.org/html/curriculum1.html>

<http://www.attecolleges.org/index.html>

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The National Center for Construction Education and Research (NCCER) is a not-for-profit education foundation created to develop industry-driven standardized craft training programs with portable credentials and help address the critical workforce shortage facing the construction industry.

Our mission is to build a safe, productive, and sustainable workforce of craft professionals.

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Board of Trustees](#)

<http://www.nccer.org/>



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Resources for CTE Sequence of Courses:

- CA State Center Consortium: <http://statecenter.com/industrysectors/programsofstudy>
- States' Career Clusters: <https://www.careerclusters.org/resources/web/pos.cfm>
- Maryland State CTE Programs of Study: <http://www.marylandpublicschools.org/NR/rdonlyres/E4BE30EF-C723-4A04-9D6E-DFDBEF67DE7F/18555/CTEBook101509.pdf>
- States' CTE websites: <http://www.khake.com/page36.html>
- [CTE Online:](#)



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CTE Course Sequence in Energy & Utilities Industry Sector

Grade/ CTE Focus	Green Energy (4 Energy)	Electronics Focus (NCCER)
Grade 10	Introduction to Energy	Your Role in the Green Environment & Green Labs
Grade 11	Energy Auditing	Electronics I & II
Grade 12	<ul style="list-style-type: none">•Introduction to Alternative Fuels•Green Construction	Power Industry Fundamentals



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How can the Center Help?

Access, Develop & Catalog Curriculum

- Research, Access, and Develop Curriculum with participation of industry, postsecondary, and secondary representatives
- Make it available on-line
- Provide teacher training on curriculum
 - Workshops
 - Conference
- Consider access to materials, supplies, equipment, and continued training



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- **Tie curriculum to industry-recognized certifications**
 - NCCER (National Center for Construction Education and Research Certifications) <http://www.nccer.org/>
 - Community College Certificates and Degrees
 - Apprenticeship Levels of Achievement
 - CEWD (Center for Energy Workforce Development) stackable credentials (in development) <http://www.cewd.org/>
 - PG&E Power Pathways <http://www.pge.com/about/careers/powerpathway/>



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Secondary Education Delivery Methods for Career Technical Education in California

- Regional Occupational Centers and Programs (ROCPs)
- California Partnership Academies
- California Community Colleges





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How can the Center Help?

Recruit, train & catalog TEACHERS

- Recruit potential teachers from industry
- Prepare industry representatives for teacher credentialing
 - Develop CTE credentialing program for energy-related industries and offer required training workshops throughout the year in different locations
- Develop cadre of industry representatives to serve as “visiting” educators
- Provide summer training and externships for existing teachers
- Maintain roster of qualified teachers
- Maintain list of training programs



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- **Identify existing providers of needed career technical education (CTE)**
 - Community Colleges and Workforce Training Centers
 - Technical Colleges
 - Universities and other Baccalaureate Colleges
 - Regional Occupation Centers and Programs
 - Apprenticeship Programs
 - California Partnership Academies
 - Industry-Based Training
 - Other community-based adult education
- **Determine gaps in Career Technical Education**
 - Program locations and availability vs. interest and need
 - Populations served vs. populations that need to be served
 - Career/job focus vs. industry needs
- **Identify strategies for creating & supporting CTE**
 - Pre-Apprenticeship programs
 - Industry-based training
 - Community –based training programs
 - Recruit and train teachers
 - Out of the box strategies



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California's Green Economy

Summary of Survey Results

A Report Prepared by
State of California
Employment Development Department
Labor Market Information Division



October 2010

EDD Employment
Development
Department
State of California

LaborMarketInfo
www.labormarketinfo.edd.ca.gov

[http://www.labormarketinfo.edd.ca.gov/content/pub/
GreenDigest/CA-Green-Economy-
SummarySurveyResults.pdf](http://www.labormarketinfo.edd.ca.gov/content/pub/GreenDigest/CA-Green-Economy-SummarySurveyResults.pdf)

(This site requires registration)



OJT Toolkit



Green Jobs



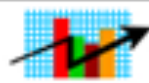
Reemployment



Rapid Response



Registered
Apprenticeship



Labor Market
Information



Innovations
in Action



Workforce
Solutions



Youth Connections



Upcoming and
Archived Webinars

State Plans and Reports

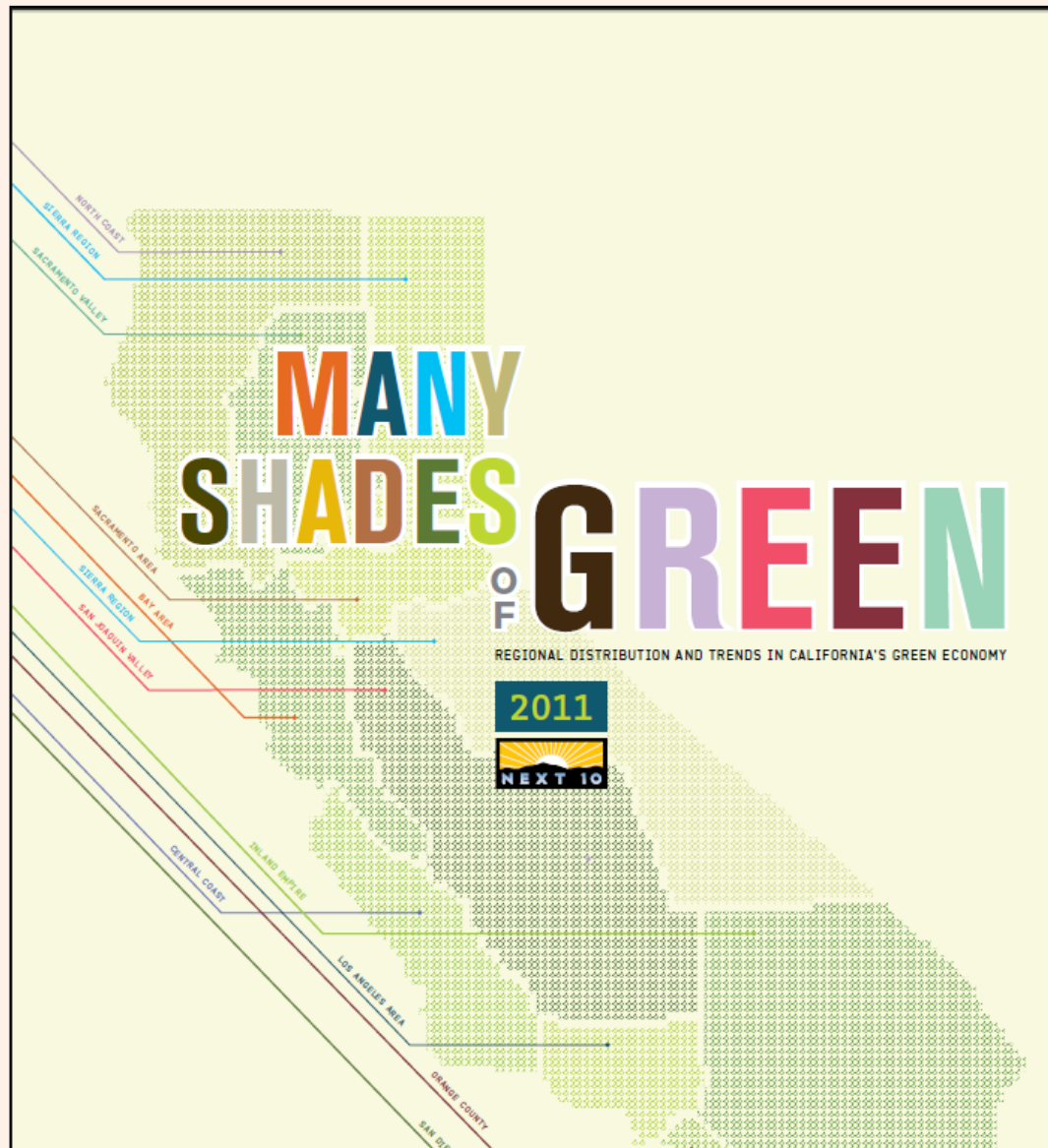
U.S. Dept. of Labor, Employment and Training Administration:

- Career Pathways
- Individual Assessment
- Adult Learning
- Job Training
- Skills Acquisition
- Industry-Recognized Certifications
- Job Placement
- State Plans & Reports
- Research, Laws and Regulations
- Technical Assistance Resources
- Closing the Gap between Business & Workers

<http://www.doleta.gov/usworkforce/>



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California State Assembly Select Committee on California's Green Economy

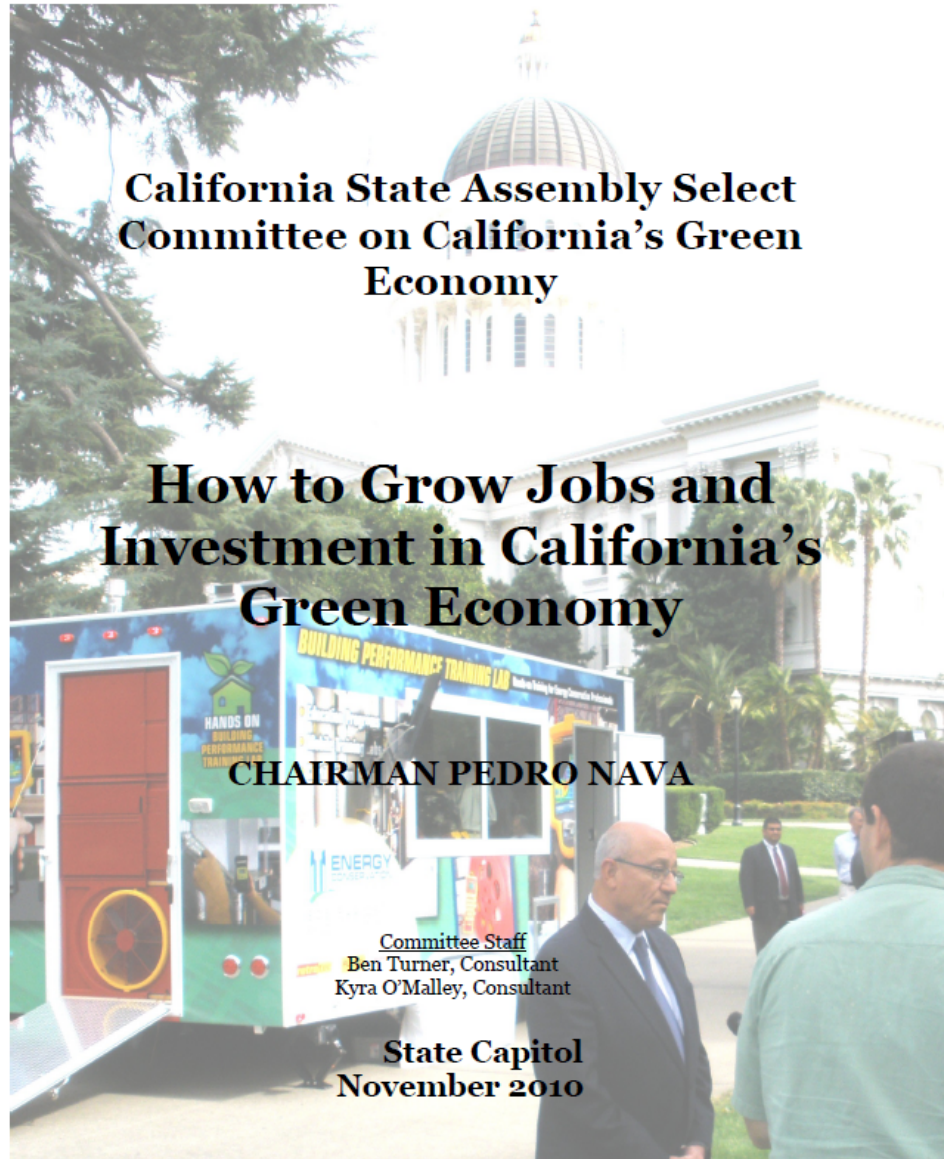
How to Grow Jobs and Investment in California's Green Economy

CHAIRMAN PEDRO NAVA

Committee Staff

Ben Turner, Consultant
Kyra O'Malley, Consultant

**State Capitol
November 2010**





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**THE OPPORTUNITIES
FOR OUR YOUTH
ARE DIMISHING**



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How could a center help California develop strategies to for a high road green economy, one that values quality, good wages & career pathways?

- Research: State, National, International
 - Trends in industry and education
 - Model education programs – secondary, postsecondary, industry-generated
- Recommendations for continued and new directions for industry and education
- **Proclaim the NEED FOR Career Technical Education in our high schools and colleges**
 - Legislative Awareness and Advocacy
 - Public Awareness and Public Relations



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Thank You



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California Department of Education
High School Transformation Unit